Washington Marine & Rail Oil Transportation Study

Scott J. Ferguson, ECY
WA ECY Prevention Section Manager, Spills Program
OCNMS Advisory Council meeting
17 July 2015

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State of Washington

Proviso

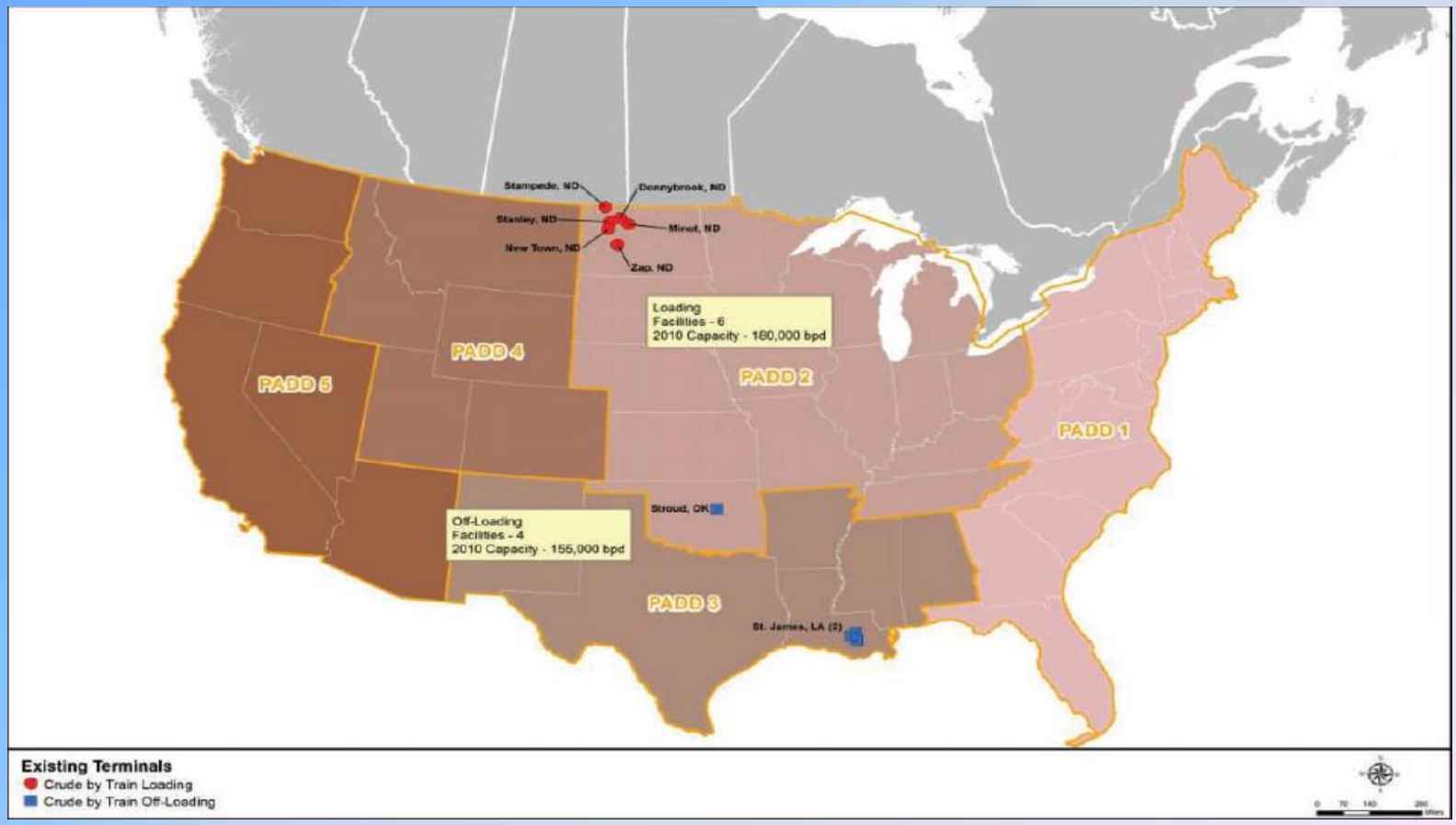
$300,000 to conduct a study of oil shipment through the state.

Study purpose is **assess public health and safety , and environmental impacts.**

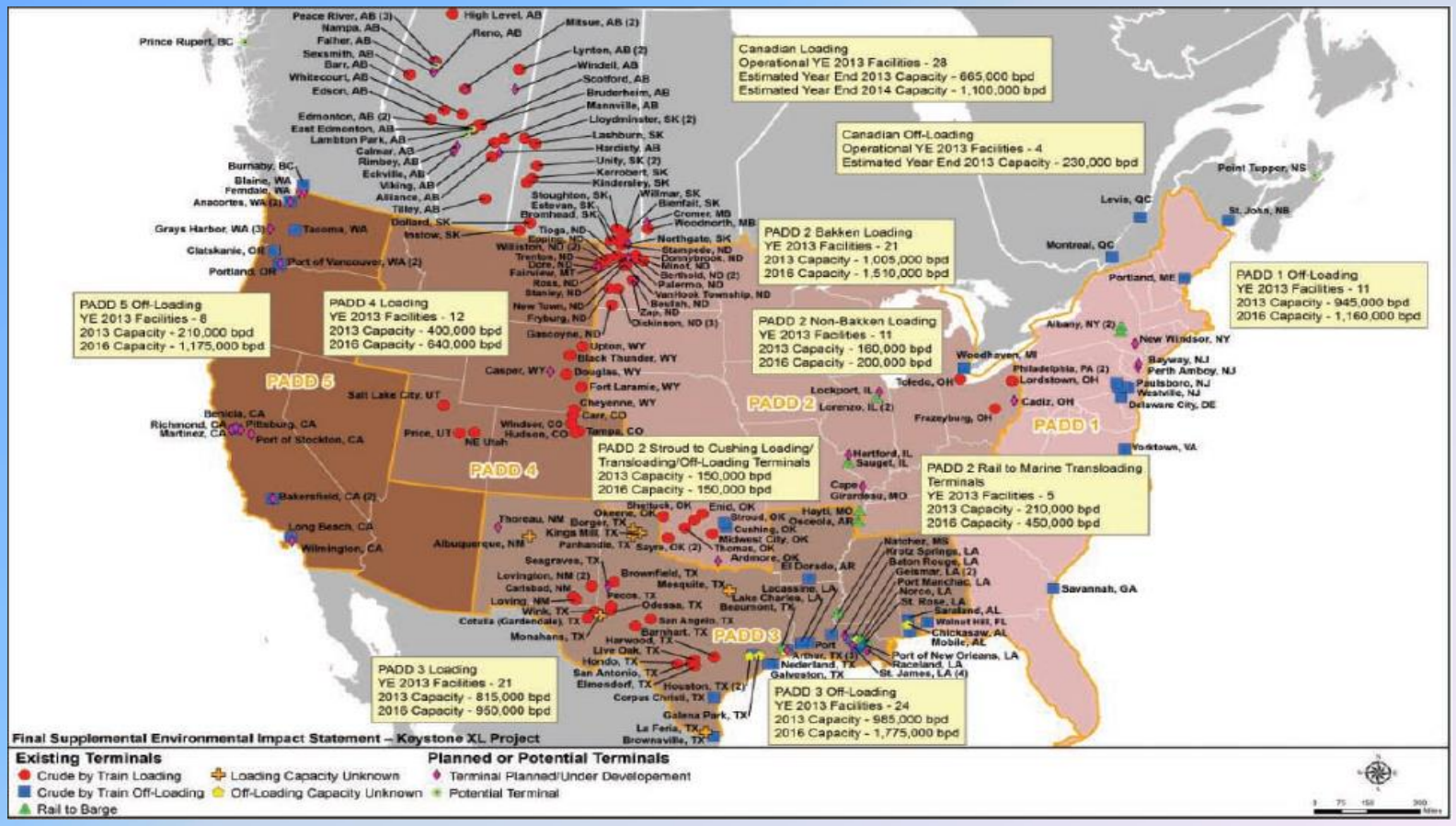
Study must provide data and analysis of statewide risks, gaps, and options for **increasing public safety and improving spill prevention and response readiness**.

Changing energy picture

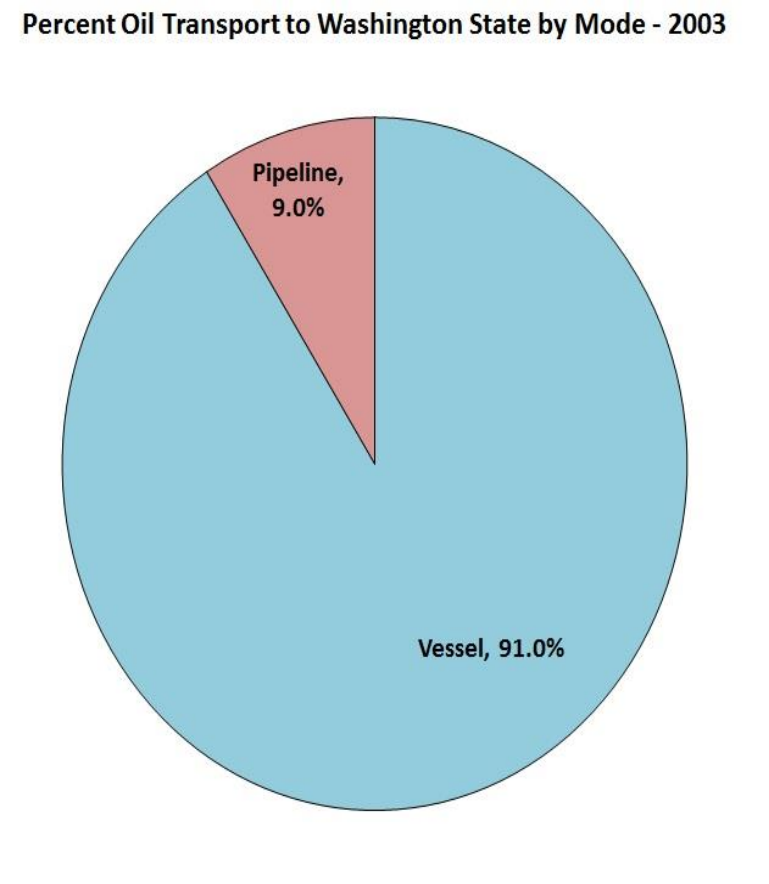
United States existing terminals 2010

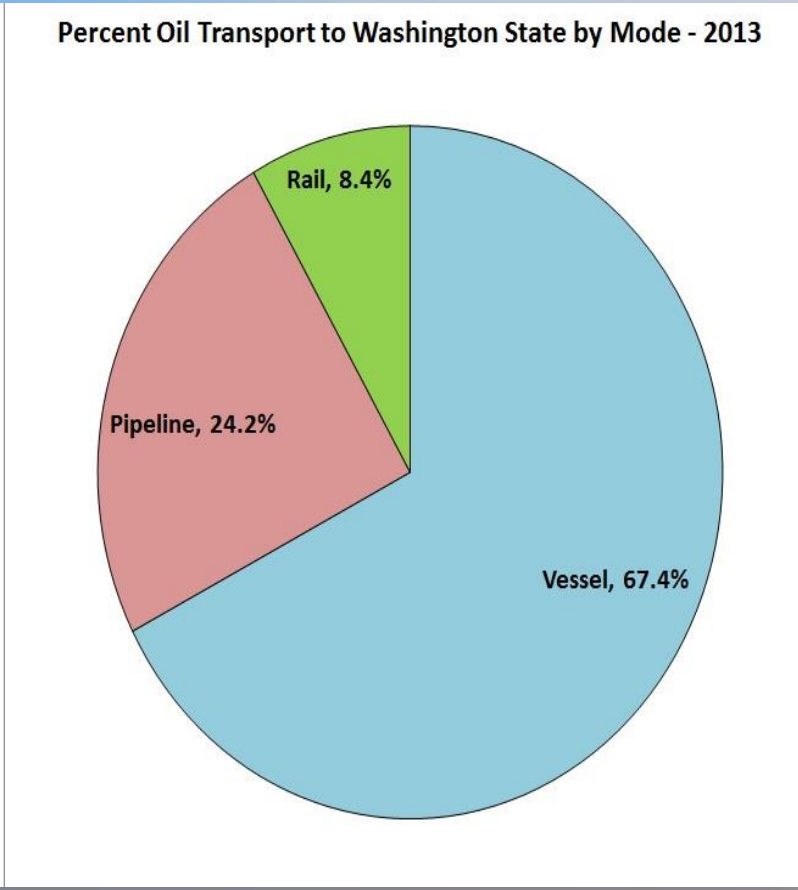


US existing and proposed terminals - 2013

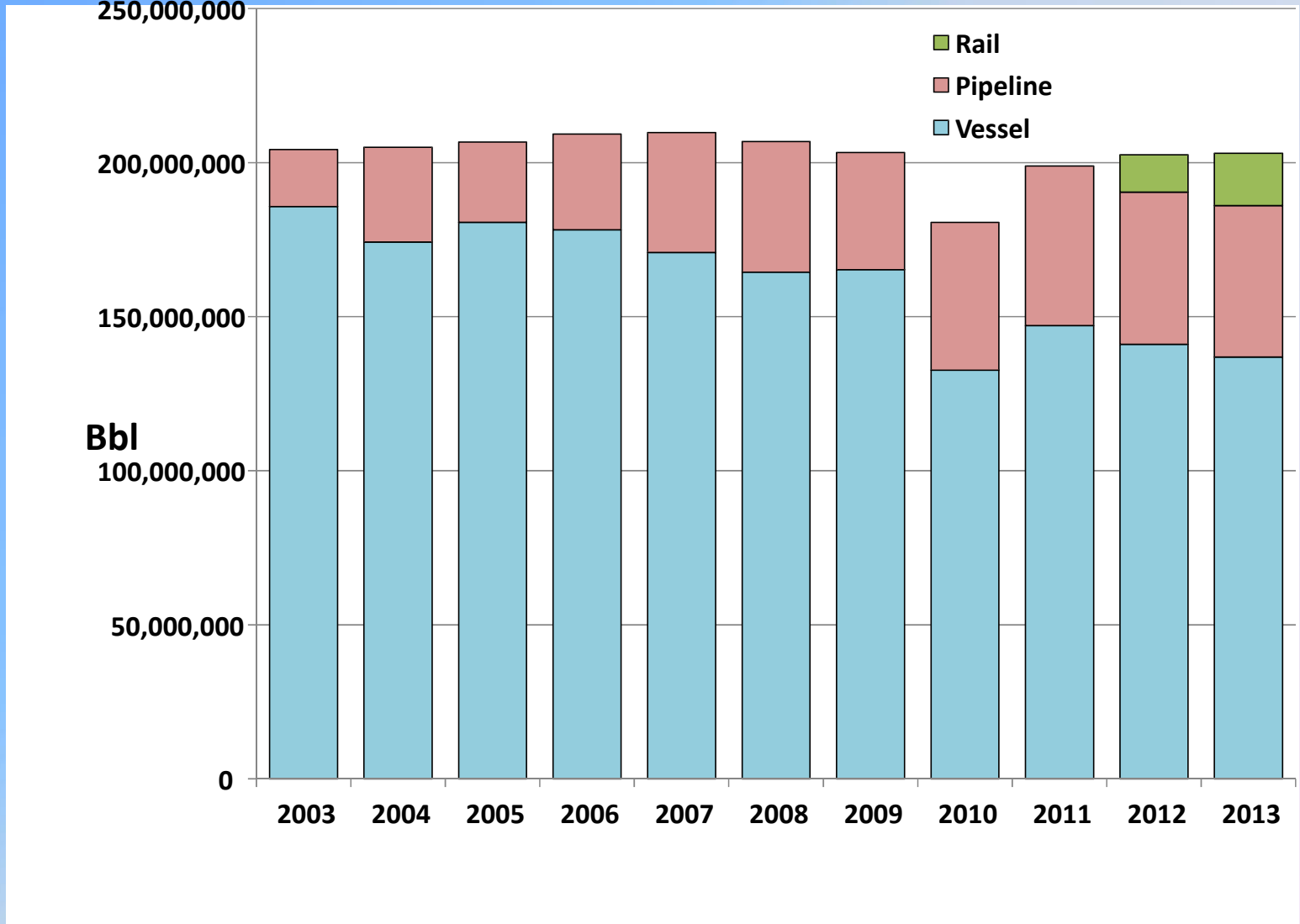


First Oil Train in WA 2012



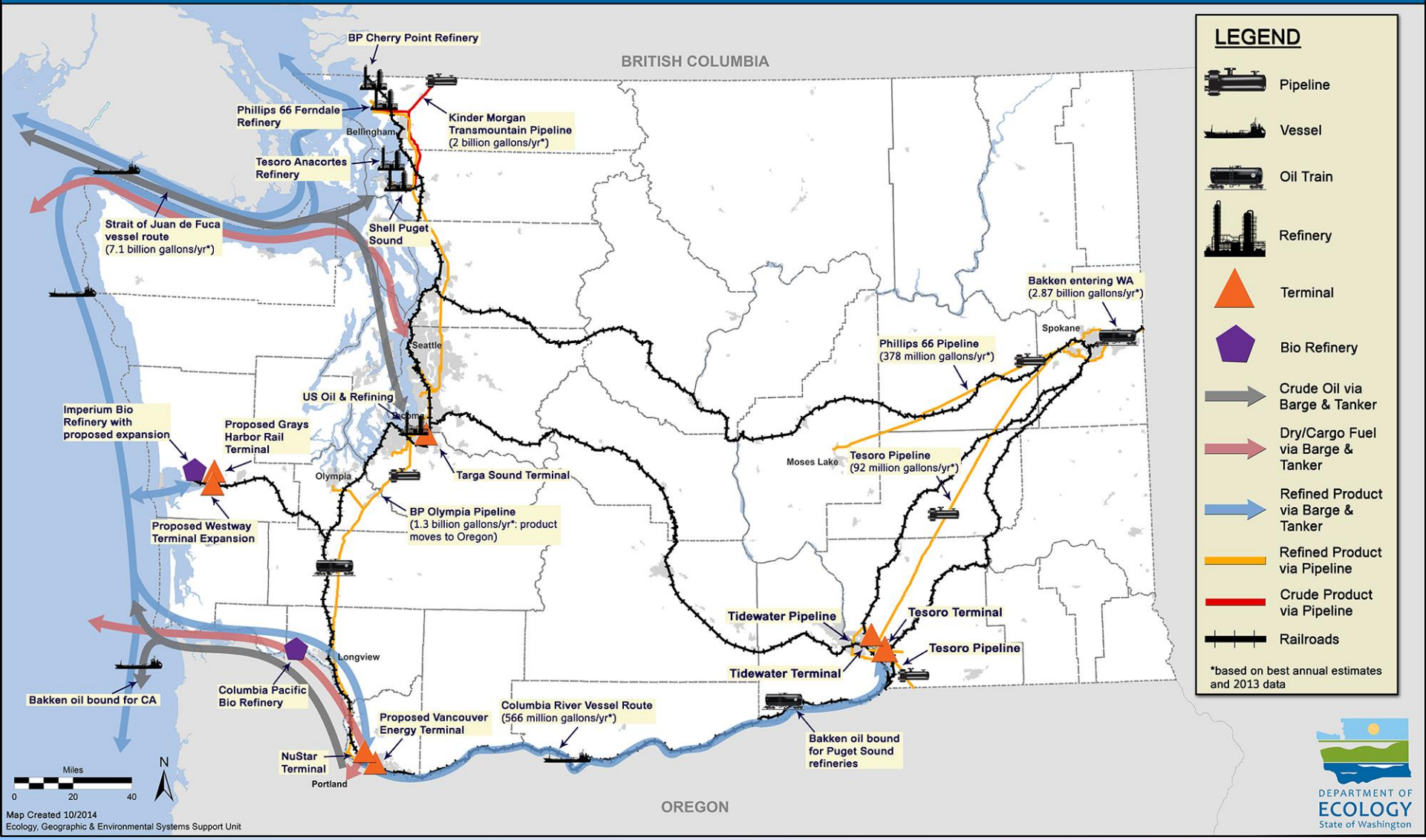


Oil imports to WA by mode '03-'13



Refineries & facilities (existing & proposed) for crude oil by rail – June 2014

Oil Movement In & Out of Washington State



Public concerns over oil train safety

BNSF Bakken Crude Oil Derailment

WA Governor's Directive

JAY INSLEE
Governor

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DIRECTIVE OF THE GOVERNOR
14-06

June 11, 2014

To: Washington State Department of Ecology

From: Jay Inslee, Governor

Subject: Oil Transport

The Pacific Northwest is experiencing rapid changes in how crude oil is moving through rail corridors and over Washington waters, creating new safety and environmental risks. As petroleum shipments from Alaska decline, transport of crude oil from the Bakken region via rail is increasing. At the same time, shipments of Canadian crude oil into British Columbia ports are increasing. These shipments also travel through Washington waters. The changing sources and transport of crude oil bring new risks to our communities along rail lines and to the Columbia River, Grays Harbor, and Puget Sound waters. Since 2008, rail traffic hauling crude oil has increased more than 40-fold nationwide and major accidents have occurred over the past year in both the United States and Canada.

Public interest in this issue is growing, and an increasing number of Washington State communities are calling for improved safety measures. Public safety is of paramount concern to our residents, citizens, and local governments. While the State will do all it can within its authority to ensure that safety, the federal government must also exercise its authority to improve the safety of oil transported by rail. In addition, both governments must work to enhance our collective ability to prevent and respond to spills that can harm our natural resources.

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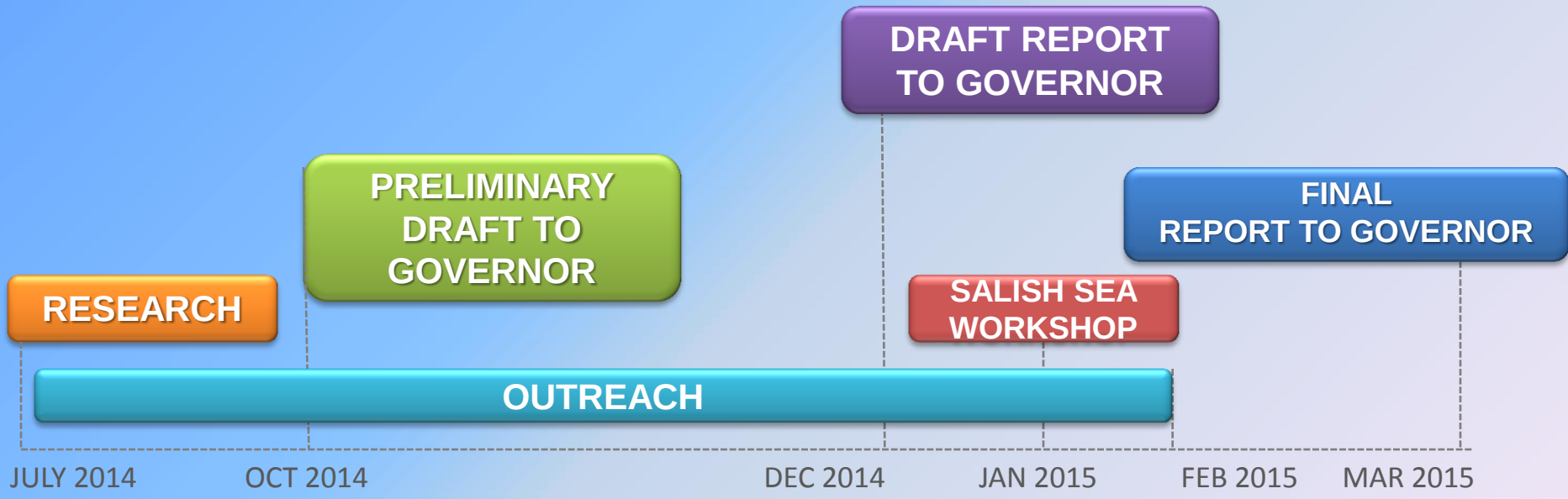
Oil Transportation Study



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Salish Sea Workshop

- Connects the recent Salish Sea traffic studies, including this Oil Transportation Study
- Report from the Workshop will become appendix in the Study
- Focus here is marine only: Only marine aspects from oil transported by rail

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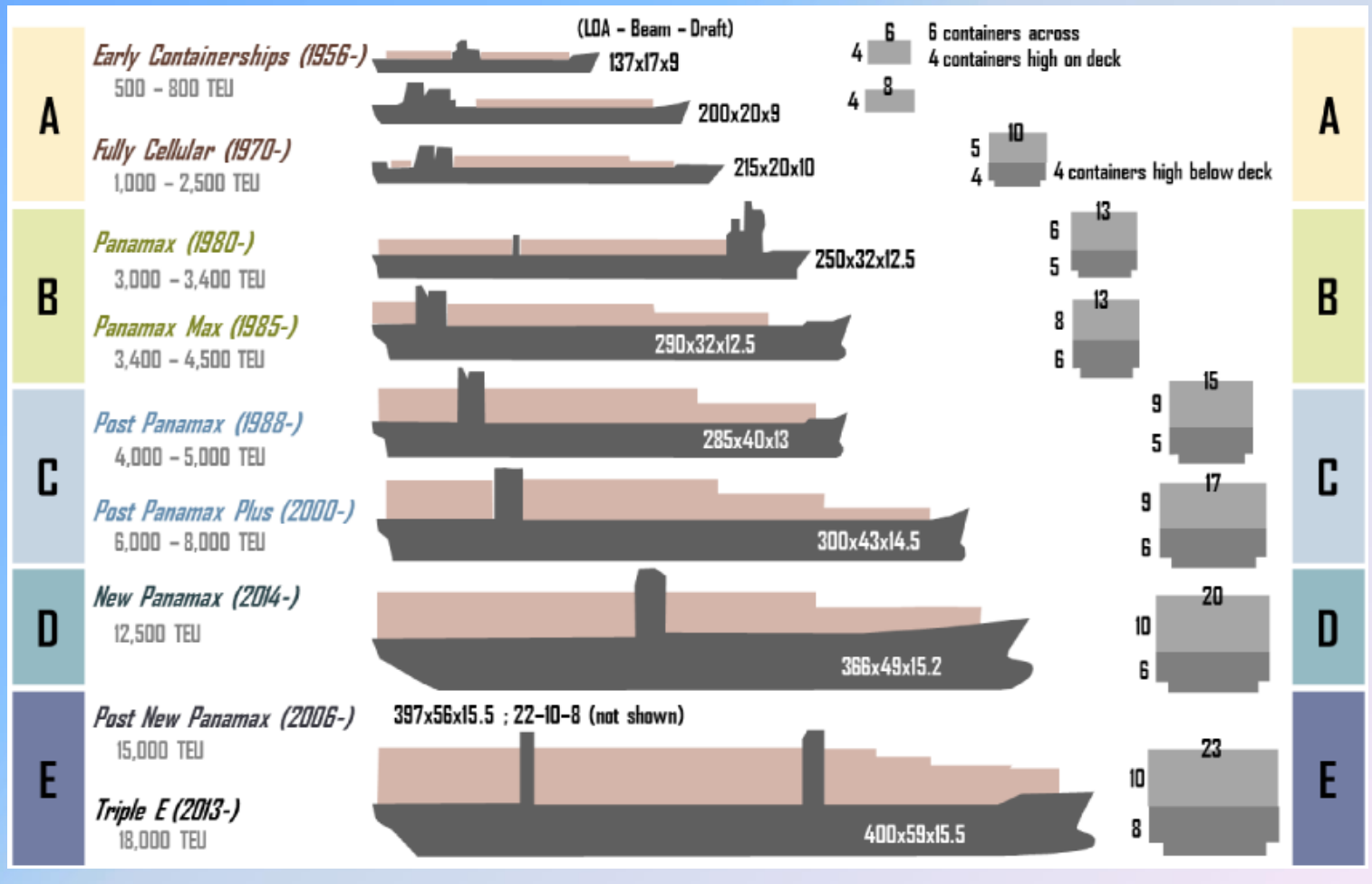
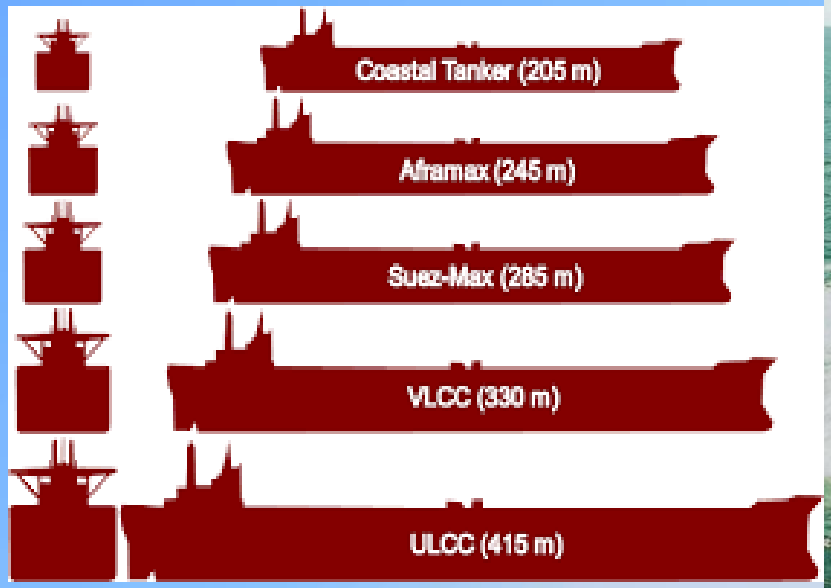
CONTAINERSHIP SIZES
(3.28 Ft/Meter)



TANKER SIZES, AND CAPESIZE BULKER*

*General around 300 meters (3.28 Ft/Meter) long and 175K DWT to 400K DWT



Panamax vs. New Panamax

	Panamax	New Panamax
Length	294.13 m (965 ft)	366 m (1,200 ft)
Width	32.31 m(106 ft)	49 m (160.7 ft)
Draught	12.04 m (41.2 ft)	15.2 m(49.9 ft)
TEU	5,000	13,000

ARTICULATED TUG AND BARGE

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- The Numbers:
  -Tanker and Containership numbers are down;
  -Bulkers flat to slight rise;
  -ATB/Towing movements up;
  -Capesize and New Panamax Bulkers and protected fuel tanks
- Containership Sizes up, 10K-13K TEUs from 6K-8K TEUs
- Puget Sound has 7 PORTS AND 7 Commissions in competition; Seaport Alliance (Tacoma and Seattle)
- CANADA Expansion
- Ports and ILWU Negotiations

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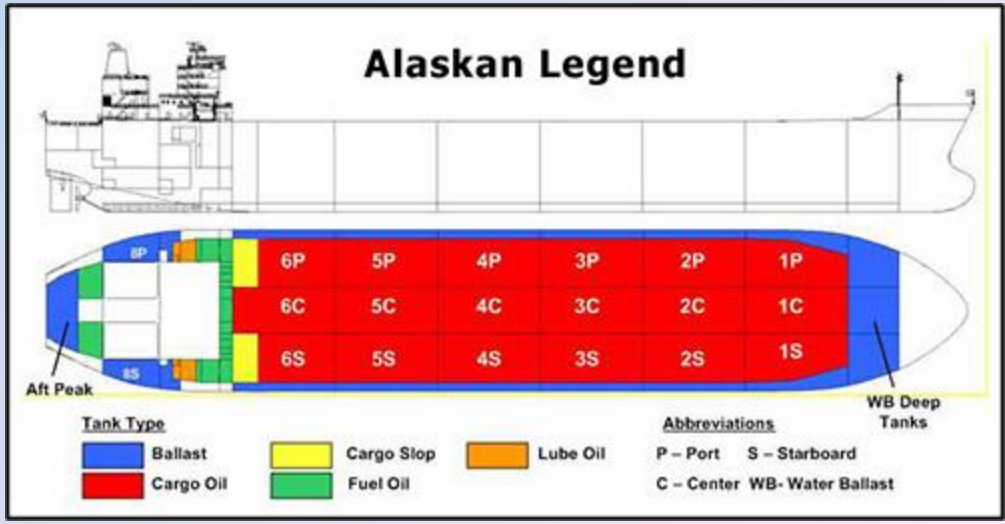
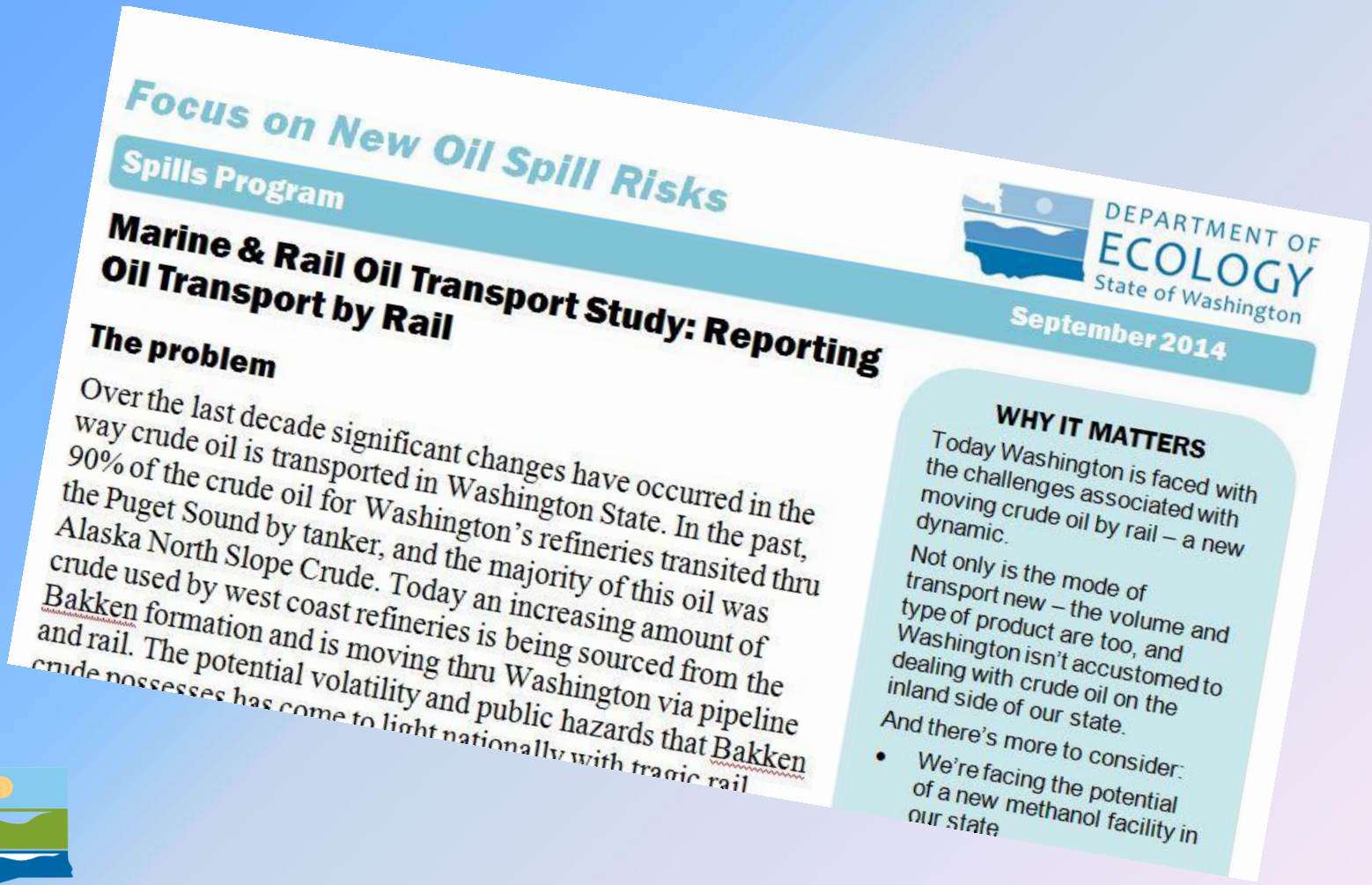
- LNG as cargo and fuel
- Panama Canal, Prince Rupert, MX, Kingston, Jamaica, Savannah, GA
- New PN Canal to open Spring 2016; VLCCs AND 13K TEU Containerships; China
- 2019 pivotal year (maybe); Changing energy picture (Crude Oil as an export commodity); China, India, Russia; Rail and landbridge vs. PN Canal
- Arctic

POLAR ENDEAVOUR AND ALASKA LEGEND



Supporting recommendations from the study



Focus on New Oil Spill Risks

Spills Program

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September 2014

Marine & Rail Oil Transport Study: Reporting Oil Transport by Rail

The problem

Over the last decade significant changes have occurred in the way crude oil is transported in Washington State. In the past, 90% of the crude oil for Washington's refineries transited thru the Puget Sound by tanker, and the majority of this oil was Alaska North Slope Crude. Today an increasing amount of crude used by west coast refineries is being sourced from the Bakken formation and is moving thru Washington via pipeline and rail. The potential volatility and public hazards that Bakken crude possesses has come to light nationally with tragic rail

WHY IT MATTERS

Today Washington is faced with the challenges associated with moving crude oil by rail – a new dynamic.

Not only is the mode of transport new – the volume and type of product are too, and Washington isn't accustomed to dealing with crude oil on the inland side of our state.

And there's more to consider:

- We're facing the potential of a new methanol facility in our state

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Rail Prevention

- Prevent derailment through track inspection
- Reduce speed
- Safer tank car standards
- Crew/manning standards
- Crossing safety
- Better identification of CBR and hazmat cargo on trains
- Rail safety committee

Marine Prevention

- Prevent vessel casualties and spills by building on previous systems (e.g., VTS and ANT systems, harbor safety committees, rescue/escort tugs)
- Reduce human error/Improve Situational Awareness
- Protective fuel tanks, bunkering, speed
- Enhance VTS, piloting, Facility/Rail/Marine
- Voluntary Best Achievable Practices
- Continue and expand VTRA studies to follow CBR and future changes

Rail Response

- Comprehensive response plans for rail
- Increase emergency response capabilities (for example, equipment, local emergency plans, HAZMAT/FF emergency go teams)
- Increase training of responders
- Update geographic response plans

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Marine Response

- Enhance response capabilities in target areas where oil will/may be transported by rail
  - Salish Sea (Puget Sound), Grays Harbor, Columbia River, WA Coast
- Response capability for new crude types based on geography/waterway
- Response capability for potential future changes in vessel traffic

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Rail Preparedness

- State authority to regulate rails limited, but state can have input to federal rulemaking process and consider potential for higher standards within state.
- Contingency planning related to facility definition.
- Ensure limits of liability are adequate.

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Marine Preparedness

- Preparing and update marine geographic response plans to reflect changes in facilities and marine/rail traffic characteristics.
- Ensuring response equipment is appropriate for that operating environment.
- Spill response equipment caches.
- Contingency planning related to facility definition.
- Ensure limits of liability are adequate.

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Moving forward, next steps

ESHB 1449
Passed April 24, 2015

- Vessel traffic risk assessment for the Columbia River,
- Vessel safety rules for Grays Harbor,
- Requiring rail companies to provide information on their ability to pay for an oil spill (not a COFR),
- Expansion of the 4 cent Oil Spill Prevention Account tax to rail. Also UTC fee charges to rail up to 2.5%,
- Contingency planning for rail. Also LERPs, 2018 report,
- Reporting requirements for rail and pipeline; pipeline crude oil reporting (2/yr); ANT for rail weekly (1/4'ly rpt),
- Geographic response planning,
- Emergency/Response equipment grants,
- UTC private and crossing safety inspection req'mts,
- Definition of 'oil' to include bitumen and its forms, and
- Positive fundamental changes on the use of the Oil Spill Response Account.
- HAZMAT/FF go teams (Potential Budget Proviso)

Thank you.

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www.ecy.wa.gov/programs/spills/OilMovement/index.html

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